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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

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Division Director

Minerals Inspection Report

Report Date: 07/02/2018

Reviewed

Mine Name: Southwest #1	Permit Number: M/47/0103	Mine Status: Inactive
Operator Name: Red Leaf Resources	Inspection Date: 6/19/2018	Permit Fees: Paid
Inspector(s): A. Abate	Inspection Time: 9:00 AM	Bond Amount: \$3,776,000
Attendee(s): K. Johns, T. Waltman, J. Patten	Weather: Sunny 70s	Bond Escalation: 11/4/2015
Inspection Purpose: Annual Inspection		Prior Inspection: 5/24/2017

Conclusions and Recommendations

No immediate action items identified. Notice, permit fees, and reclamation bond are up to date and in compliance. Continue to monitor the site when in the area.

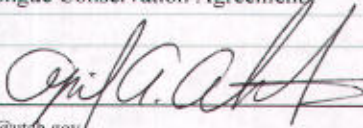
Elements of Inspection	Evaluated & Commented	Enforcement
1. <i>Permits, Revisions, Transfer, Bonds</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Discussed the status of the mine. The company is primarily working in the laboratory to develop new test capsule technology. Research is at least 2 years out until field scale testing is viable. The NOI was recently amended to include a new water impoundment structure adjacent to the Pilot area. An updated EPS Facility Site Plan (Figure 1A) was also submitted. The total disturbance area current measures at just under 500 acres. The mine is permitted for 16,838.		
2. <i>Public Safety (shafts, adits, trash, signs, highwalls)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Access to the site is from a gate. Even with a gate, because of the site's remote location, it is still easy for unauthorized access to enter the location.		
3. <i>Protection of Drainages/Erosion Control</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Detention sumps are located throughout the permit area around its perimeter. Sumps are cleaned out on an as-needed basis. Inspected a nearby seep in the northeast corner of the permit area. The seep was not flowing at the time of the inspection but had indications of previous flow appearing to be originating out of the oil-shale outcrop. The company is monitoring the flow and water chemistry of the seep. Request that the location of this seep be added to the hydrology map.		
4. <i>Deleterious Material</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
None was observed onsite. The operator recently dismantled the large white tent structure that was on the property. The petroleum contents of the tanks in the Pilot area have recently been drained.		
5. <i>Roads (maintenance, surfacing, dust control, safety)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The site does not contain any paved roads. The site is inactive and therefore there is no significant source of dust being emitted from vehicle traffic.		
6. <i>Reclamation</i>	<input type="checkbox"/>	<input type="checkbox"/>
7. <i>Backfilling/Grading (trenches, pits, roads, highwalls, shafts)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The exploration pit was recently partially backfilled in order to stabilize it. Discussed the need to line the construction pond which was just being used for dust control. The water when contained in it, is just well water or stormwater, so there is really no reason why it needs to be lined.		
8. <i>Soils</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Topsoil berms were stabilized with the approved interim seedmix. The vegetation on the topsoil piles was growing exceptionally well.		
9. <i>Revegetation</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Rare plant test area progress was discussed. Graham's Penstemon were growing in the test areas both on native soil and on crushed oil shale. The area that appears to be the most successful with the plantings is the test area is the oil shale outcrop with no topsoil cover. A new area of spent oil shale was added to the reference area to see if the approved seed mix could be planted successfully. Some seedlings were observed on the spent shale pile but not great likely due to lack of moisture. The Division provided the operator with the report that was issued by SWCA regarding the evaluation of the permit area for rare plants that are part of the *White River* Penstemon and Graham's Beardtongue Conservation Agreement.

10. Other



Inspector's Signature: _____

CC: Jerry Mansfield, jmansfield@utah.gov

File: /C:/Users/aprilabate/Desktop/Inspections/Insp-06192018.pdf



Mound of spent shale located in the reference area. This pile is being used as an experiment to see if the seed mix can grow on spent oil shale.



Penstemon is growing well on oil shale test plot.



Construction impoundment was dry. Liner is not necessary in this pond if it contains well water or stormwater runoff only.



General vicinity of the seep located in the northeast portion of the permit area.

Utah Mineral Mines



Current Disturbance Area approximation